

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: 15661

Luminaire Tested: **242/3T5**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: 15661  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: 242/3T5  
Description: NEORAY 3 LAMP 2 X 2 TROFFER LUMINAIRE  
WITH WHITE INTERIOR AND WHITE LENS OVER PERFORATIONS  
Light Source: THREE PHILIPS 24 WATT T5 LAMPS

F24T5/841/HO. LUMEN RATING = 1800 LMS.

Ballast/Driver: ONE SYL. QT1 AND ONE QT2X39-24/120PHO BALLAST OPERATING AT 120 VAC AND  
74 WATTS

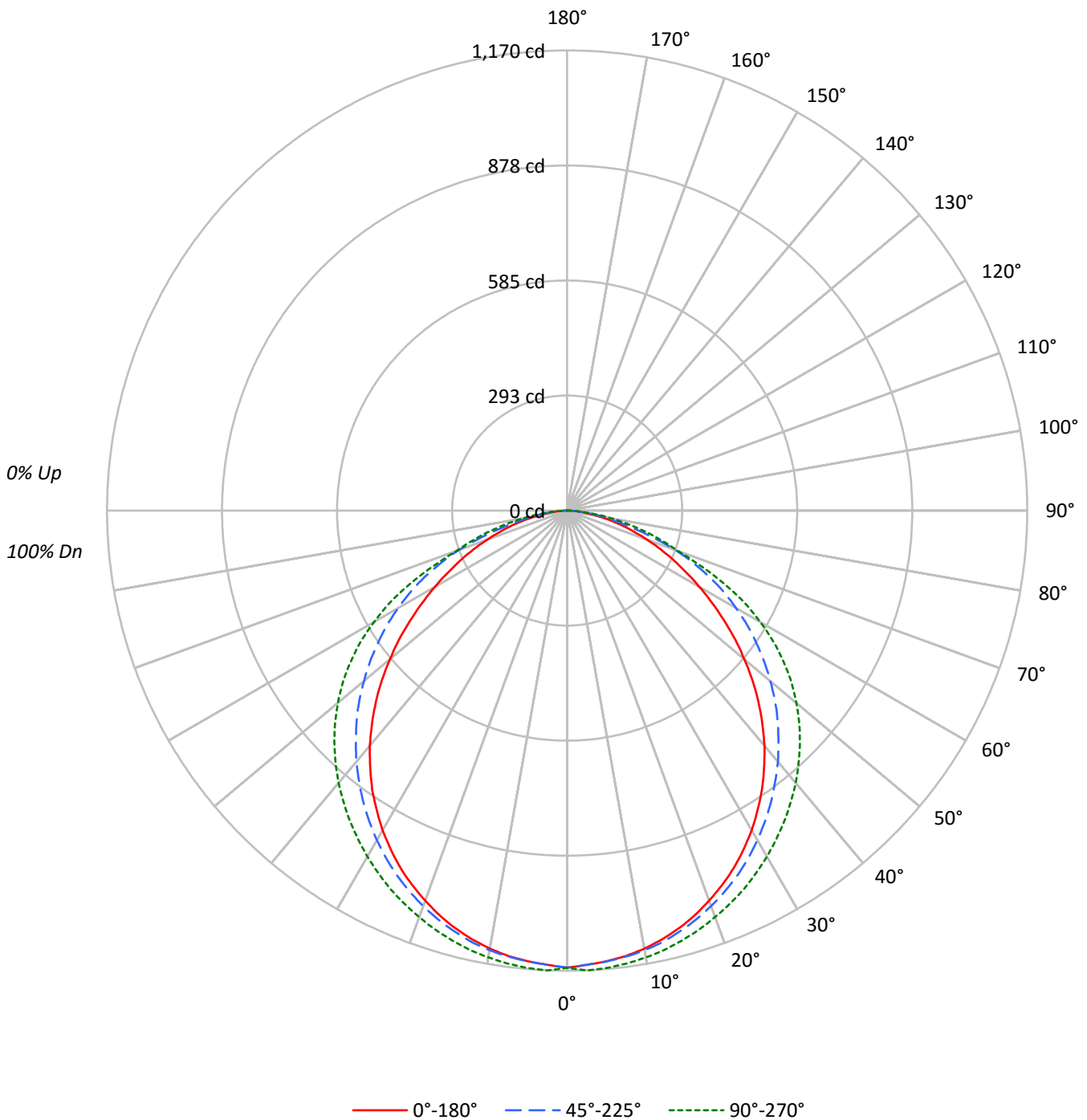
**Summary**

Lumens per Lamp: 1800 (3 lamps)  
Luminaire Lumens: 3179.2 lumens  
Efficiency: 58.9%  
Efficacy: 43.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.3 / 1.36  
Luminous Opening: Rectangular (W 1.88' x L: 1.94' x H: 0')  
CIE Type: Direct

Input Watts (W): 74  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
RC	80									70									50									30									10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0														
RCR																																						
0	70	70	70	70	68	68	68	68	65	65	65	63	63	63	60	60	60	60	60	60	60	60	60	59														
1	64	62	59	57	63	60	58	56	58	56	54	55	54	53	53	52	51	51	51	51	51	51	51	50														
2	59	54	50	47	57	53	49	46	51	48	45	49	46	44	47	45	43	43	43	43	43	43	43	42														
3	53	47	43	39	52	46	42	38	45	41	38	43	40	37	41	39	36	36	36	36	36	36	36	35														
4	49	42	37	33	48	41	36	33	40	36	32	38	35	32	37	34	31	31	31	31	31	31	31	30														
5	45	37	32	28	44	37	32	28	36	31	28	34	31	28	33	30	27	27	27	27	27	27	27	26														
6	42	34	29	25	40	33	28	25	32	28	24	31	27	24	30	27	24	24	24	24	24	24	24	23														
7	39	31	25	22	38	30	25	22	29	25	22	28	24	21	28	24	21	21	21	21	21	21	21	20														
8	36	28	23	20	35	28	23	19	27	22	19	26	22	19	25	22	19	19	19	19	19	19	19	18														
9	34	26	21	18	33	25	21	18	25	20	17	24	20	17	23	20	17	17	17	17	17	17	17	16														
10	31	24	19	16	31	23	19	16	23	19	16	22	18	16	22	18	16	16	16	16	16	16	16	15														

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3430	3430	3430
5°	3407	3409	3457
10°	3389	3402	3457
15°	3359	3385	3457
20°	3315	3361	3455
25°	3265	3334	3459
30°	3198	3298	3462
35°	3114	3257	3471
40°	3007	3212	3484
45°	2870	3160	3494
50°	2700	3097	3494
55°	2505	3023	3461
60°	2292	2929	3351
65°	2085	2788	3084
70°	1872	2521	2583
75°	1627	1985	2332
80°	1339	1591	1946
85°	996	1178	1375



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	109.7	3.5	2.0
10°-20°	313.6	9.9	5.8
20°-30°	473.4	14.9	8.8
30°-40°	567.9	17.9	10.5
40°-50°	585.2	18.4	10.8
50°-60°	520.7	16.4	9.6
60°-70°	377.7	11.9	7.0
70°-80°	188.2	5.9	3.5
80°-90°	42.7	1.3	0.8
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	896.7	28.2	16.6
0°-40°	1464.6	46.1	27.1
0°-60°	2570.5	80.9	47.6
0°-90°	3179.2	100.0	58.9
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	3179.2	100.0	58.9

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1150	1152	1151	1158	1167	109
15°	1099	1103	1108	1119	1131	310
25°	1003	1010	1024	1045	1062	461
35°	864	877	904	939	963	540
45°	688	710	757	808	837	530
55°	487	519	588	644	673	436
65°	298	331	399	432	442	297
75°	143	162	174	193	204	152
85°	29	30	35	38	41	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1162.3	1162.3	1162.3	1162.3	1162.3
2.5°	1156.0	1157.9	1155.8	1161.3	1170.4
5°	1150.1	1152.0	1150.7	1157.9	1167.0
7.5°	1142.4	1144.7	1144.1	1151.3	1161.5
10°	1130.8	1134.2	1135.1	1142.2	1153.7
12.5°	1116.6	1120.7	1123.4	1131.8	1143.9
15°	1099.3	1103.4	1107.8	1118.7	1131.3
17.5°	1079.1	1084.0	1090.4	1103.7	1116.8
20°	1055.6	1061.6	1070.1	1085.4	1100.1
22.5°	1030.3	1036.7	1048.0	1066.0	1082.1
25°	1002.7	1009.7	1023.7	1044.6	1062.2
27.5°	971.5	979.4	996.7	1020.5	1039.6
30°	938.4	947.7	967.8	995.3	1015.8
32.5°	901.9	912.5	936.3	967.6	990.0
35°	864.4	876.7	904.0	939.3	963.3
37.5°	822.5	837.1	869.0	907.9	933.9
40°	780.6	796.9	833.8	876.7	904.3
42.5°	734.7	753.3	795.3	842.6	871.2
45°	687.7	709.7	757.1	807.6	837.1
47.5°	639.6	664.2	717.1	770.7	800.5
50°	588.0	616.3	674.5	730.3	760.9
52.5°	538.8	568.5	632.2	689.0	719.4
55°	486.9	519.4	587.5	644.2	672.7
57.5°	437.2	472.4	543.7	598.5	623.5
60°	388.3	423.5	496.2	547.3	567.8
62.5°	342.3	377.6	449.5	493.1	509.2
65°	298.5	330.9	399.3	432.0	441.6
67.5°	256.9	287.5	347.1	367.7	367.0
70°	217.0	245.5	292.2	295.4	299.3
72.5°	177.6	202.6	232.3	236.9	251.1
75°	142.7	162.4	174.1	192.7	204.5
77.5°	109.1	121.4	128.5	148.4	157.1
80°	78.8	84.9	93.6	107.8	114.5
82.5°	50.4	53.4	61.6	69.8	73.9
85°	29.4	30.5	34.8	38.4	40.6
87.5°	11.9	11.4	12.1	13.5	14.0
90°	0.5	0.5	0.5	0.5	0.5

(END OF REPORT)